We claim:

1.　　A video processing device, comprising:

a background audio change detecting means for detecting background audio changes in video data; and

a memory communicating with said background audio change detecting means and storing said video data and audio data corresponding to said video data;

wherein said background audio change detecting means detects a background audio change in said audio data and detects semantically meaningful video scenes using detected background audio changes.

2.　　The device of claim 1, wherein said background audio change detecting means further delimits segments of said video data.

3.　　The device of claim 1, wherein said background audio change detecting means further determines if said audio data comprises background audio.

4.　　The device of claim 1, wherein said background audio change comprises an audio blank.

5.　　The device of claim 1, wherein said background audio change comprises an audio volume change.

6.　　The device of claim 1, wherein said background audio change comprises an audio frequency content change.

7. The device of claim 1, wherein said background audio change comprises a start or stop of music.

8. The device of claim 1, wherein said video processing device comprises a video recorder device.

9. The device of claim 1, wherein said video processing device comprises a video editor device.

10. The device of claim 1, wherein said video processing device comprises a video authoring device.

11.   A video processing device, comprising:

a processor;

a background audio change detector communicating with said processor; and

a memory communicating with said processor, said memory storing video data and audio data corresponding to said video data;

wherein said background audio change detector detects a background audio change in said audio data and wherein said processor detects semantically meaningful video scenes using detected background audio changes and delimits segments of said video data.

12.   The device of claim 11, wherein said memory stores a predetermined audio volume change threshold and wherein said background audio change detector comprises an audio volume detector, and wherein said audio volume detector generates an audio volume change value and detects a background audio change when said audio volume change value exceeds said predetermined audio volume change threshold.

13.   The device of claim 11, wherein said memory stores a predetermined audio frequency change threshold and wherein said background audio change detector comprises a frequency change detector, and wherein said frequency change detector generates a frequency change value and detects a background audio change when said frequency change value exceeds said predetermined audio frequency change threshold.

14.   The device of claim 11, wherein said memory stores a predetermined audio blank volume threshold and a predetermined audio blank period threshold and wherein said background audio change detector comprises an audio blank detector, and wherein said audio blank detector generates an audio blank volume value and detects an audio blank when said audio blank volume value is less than said predetermined audio blank volume threshold for at least said predetermined audio blank period threshold.

15.   The device of claim 11, wherein said memory stores a predetermined noise threshold and a predetermined music volume threshold and wherein said background audio change detector comprises a music detector, and wherein said music detector detects substantially stable frequency peaks in said audio data and detects music if a music volume is lower than said predetermined noise threshold and exceeds said predetermined music volume threshold.

16.   The device of claim 11, wherein said video processing device comprises a video recorder device.

17.   The device of claim 11, wherein said video processing device comprises a video editor device.

18.   The device of claim 11, wherein said video processing device comprises a video authoring device.

19. The device of claim 11, wherein said memory further stores a speech detection routine, and wherein said processor uses said speech detection routine to determine that said audio component is background audio if speech of a predetermined energy level is not detected.

20. The device of claim 11, wherein said memory further stores a music detection routine, and wherein said processor uses said music detection routine to determine that said audio component is background audio if music of a predetermined signal-to-noise level is not detected.

21.   A method of segmenting video data, comprising the steps of:

detecting background audio changes in background audio data corresponding to said video data;

detecting semantically meaningful video scenes using detected background audio changes.

22.   The method of claim 21, further comprising the preliminary step of determining whether audio data of said video data is said background audio.

23.   The method of claim 21, with the step of detecting background audio changes further comprising detecting an audio volume change in said background audio in excess of a predetermined audio volume change threshold.

24.   The method of claim 21, with the step of detecting background audio changes further comprising detecting a frequency change in said background audio in excess of a predetermined audio frequency change threshold.

25.   The method of claim 21, with the step of detecting background audio changes further comprising detecting an audio volume that is less than a predetermined audio blank volume threshold for at least a predetermined audio blank period threshold.

26.   The method of claim 21, with the step of detecting background audio changes further comprising the steps of:

generating a frequency data from said audio data;

detecting substantially stable frequency peaks in said frequency data; and

detecting a background audio change at a start or stop of said substantially stable frequency peaks.

27.   The method of claim 21, further comprising the step of delimiting video segments corresponding to said semantically meaningful video scenes.

28.   The method of claim 21, further comprising the step of delimiting video segments corresponding to said semantically meaningful video scenes by inserting indexes into said video data at a beginning of said semantically meaningful video scenes.

29.   The method of claim 21, further comprising the step of delimiting video segments corresponding to said semantically meaningful video scenes by extracting and storing one or more representative video frames from each video segment.

30.   A method of segmenting video data, comprising the steps of:

determining whether audio data corresponding to said video data is

background audio;

sampling said audio data if said audio data is said background audio;

detecting background audio changes in said audio data;

detecting video shot changes in said video data;

detecting semantically meaningful video scenes using detected background

audio changes that occur in conjunction with detected video shot changes; and

delimiting video segments corresponding to said semantically meaningful

video scenes.

31.   The method of claim 30, with the step of detecting background audio

changes further comprising detecting an audio volume change in said background

audio in excess of a predetermined audio volume change threshold.

32.   The method of claim 30, with the step of detecting background audio

changes further comprising detecting a frequency change in said background audio

in excess of a predetermined audio frequency change threshold.

33.   The method of claim 30, with the step of detecting background audio

changes further comprising detecting an audio volume that is less than a

predetermined audio blank volume threshold for at least a predetermined audio

blank period threshold.

34.   The method of claim 30, with the step of detecting background audio changes further comprising the steps of:

generating a frequency data from said audio data;

detecting substantially stable frequency peaks in said frequency data; and

detecting a background audio change at a start or stop of said substantially stable frequency peaks.

35.   The method of claim 30, with the step of delimiting video segments further comprising inserting indexes into said video data at a beginning of said semantically meaningful video scenes.

36.   The method of claim 30, with the step of delimiting video segments further comprising extracting and storing one or more representative video frames from each video segment.